



**Registrar**

# **National Electric Power Regulatory Authority**

## **Islamic Republic of Pakistan**

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No. NEPRA/TRF-WPT/2015/15105-15107  
October 19, 2015

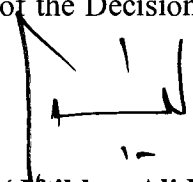
**Subject: Decision of the Authority in the Matter of Motions for Leave for Review filed against the Determination of the Authority dated June 24, 2015 in the matter of Upfront Tariff for Wind Power Plants**

Dear Sir,

Kindly refer to this office letter No. NEPRA/TRF-WPT/2015/9512-9514 dated 24.06.2015 whereby determination of National Electric Power Regulatory Authority in the matter of Upfront Tariff for Wind Power Generation was communicated to Federal Government for notification in the official Gazette.

2. Enclose please find herewith the subject Decision of the Authority along with Annex-I, II, III, IV and V (27 pages) with reference to above referred Determination of the Authority dated 24.06.2015.
3. The Decision is being intimated to the Federal Government for the purpose of notification of the approved tariff in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).
4. Order of the Authority along with attached Annexures (I to V) of the Decision needs to be notified in the official Gazette.

Enclosure: As above

  
19/10/15  
(Ftikhar Ali Khan)

Secretary,  
Ministry of Water & Power  
'A' Block, Pak Secretariat  
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.

**DECISION OF THE AUTHORITY IN THE MATTER OF MOTIONS FOR LEAVE FOR REVIEW FILED AGAINST THE DETERMINATION OF THE AUTHORITY DATED JUNE 24, 2015 IN THE MATTER OF UPFRONT TARIFF FOR WIND POWER PLANTS**

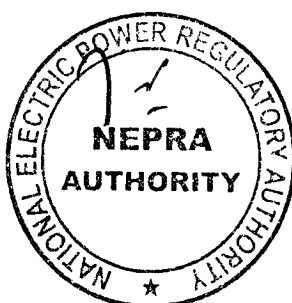
1. National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") vide its decision No. NEPRA/TRF-WPT01/2015-9512-9514 dated June 24, 2015 issued the upfront tariff determination for wind power plants (hereinafter referred to as "Upfront Tariff 2015"). Following companies (hereinafter referred to as "petitioners") filed motions for leave for review under Rule 16(6) of the NEPRA Tariff (Standards & Procedure), 1998 Rules read with Regulation 3 of the NEPRA (Review Procedure) Regulations, 2009 in respect of the Upfront Tariff 2015 (hereinafter referred to as "review motions").

S.No	Parties/Petitioners	S.No	Parties/Petitioners
1	Bridge Factor Private Limited	9	Indus Wind Energy Limited
2	Din Energy	10	Lakeside Energy (Pvt.) Limited
3	Emerald Energy Limited	11	Master Green Energy Private Limited
4	Energy Department, Government of Sindh	12	Mr. Arooj Asghar
5	Frontier Renewable Energy Private Limited	13	NASDA Energy (Pvt.) Ltd.
6	Green Power Private Limited	14	Triconboston Consulting Corporation (Pvt) Ltd
7	Harbin Electric International (HEI)	15	Western Energy Private Limited
8	Hartford Alternative Energy Private Limited	16	Wind Eagle Limited

2. The Authority considered the review motions and decided to admit them for further processing. The Authority also decided to consolidate the review motions and dispose of the same through a combined order. In order to arrive at an informed decision and to meet the requirements of natural justice and law, the Authority decided to provide an opportunity of hearing to all the parties. Notices of hearing were sent on August 11, 2015 to all the parties that filed the review motions as well as to the interveners/commentators of the Upfront Tariff 2015 proceedings. The hearing in this regard was held on August 18, 2015.

3. **Grounds of review motions:** The petitioners have sought review of the Upfront Tariff 2015 on the following parameters:

- Capacity factor & Revenue Sharing Mechanism
- Sinosure fees
- Spread over LIBOR
- Time to opt for upfront tariff
- Construction period
- Power evacuation certificate
- Withholding tax on dividend
- Project cost
- Sharing in savings in spread over KIBOR/LIBOR
- Provision of cost of DSRA, Running Finance and Land Cost



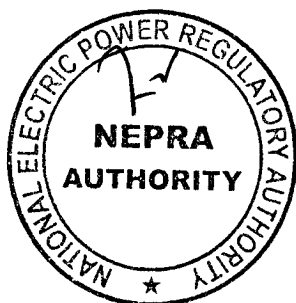
## GROUNDS OF REVIEW MOTION

### i. Capacity Factor & Revenue Sharing Mechanism

In the Upfront Tariff 2015, the Authority took capacity factor of 35%. The petitioners submitted that the approved capacity factor of 35% is on the higher side. They submitted that the approved plant factor appears to be based on the probability of exceedance factor of P60/P70, however, the lenders require net annual energy generation corresponding to P90 confidence level and consideration of capacity factor below this level makes the projects un-bankable. Further, the petitioners stated that the Authority did not consider submissions of the parties (including AEDB) of the proceedings of the Upfront Tariff 2015 where they proposed that the capacity factor should be between 31%-33% at P90 probability level. The petitioners also requested to maintain the revenue sharing mechanism allowed in Upfront Tariff 2015. During the hearing, the representative of one of the petitioners namely Bridge Factor Private Limited submitted that it will also be reasonable if the Authority revised the capacity factor to 34%.

Two petitioners referred to para 7(i) of the Upfront Tariff 2015 which states that "Vestas Wind Technology Pakistan (Pvt.) Limited and Nordex Pakistan (Pvt.) Limited submitted that the advertised capacity factor is achievable but not with the proposed project cost". Quoting the mentioned para, the petitioners submitted that the claims of energy output made by these two turbine suppliers, and others as well, have been investigated in detail and discussed with those suppliers with the intent to consider those wind turbines for their projects. It has been revealed and acknowledged by the turbine suppliers that the assessments carried out by them did not take into account the technically appropriate techniques, i.e. the site specific conditions (temperature, topology, roughness, climate etc.) and P90 constraints were also not considered.

The Authority considered the submissions of the petitioners and has noted that the capacity factor of 38.44% was originally proposed/advertised for the determination of wind upfront tariff, however, majority of the interveners requested the Authority to reduce the advertised capacity factor. During proceedings, AEDB also submitted the results of estimated annual energy yields/capacity factors of eight different wind turbine generators being installed in Pakistan. Those results were based on the parameters of RISOE as well as of different Independent Power Producer's ("IPPs") lenders for both Jhampir and Gharo regions. Therefore, the contention of the petitioners that their submissions were not considered while determining Upfront Tariff 2015 is not correct as the suggestions of all the interveners including AEDB were examined in detail and based on that the Authority decided to decrease the capacity factor from 38.44% to 35%.

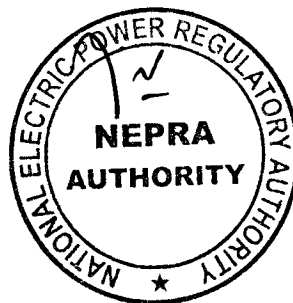


The Authority in particular noted that lenders requisite probability of exceedance factor was duly considered while determining the capacity factor for the Upfront Tariff 2015. Additionally, number of technical and various other related factors were also considered to arrive at the final determined capacity factor. The aim was to maximize the utilization of the available resources by bringing in the efficient wind turbine technologies available in the market at competitive prices. Considering all of the stated above and the fact that the Authority has already considered the evidences and material facts and nothing new has been produced which require change on this account, the Authority has decided to maintain its decision on capacity factor, i.e. 35%. Similarly, the revenue sharing mechanism as allowed in the Upfront Tariff 2015 shall also remain unchanged.

**ii. Sinosure/Other Credit Agency Fees**

The Authority noted that it did not allow the costs and fees associated with Sinosure and other export credit agencies as part of the project cost or as a pass through item in the Upfront Tariff 2015 on the pretext that the same was not allowed in the upfront tariff determined by the Authority vide decision No. NEPRA/TRF-WPT/2013/3942-3944 dated April 24, 2013 (hereinafter referred to as "Upfront Tariff 2013"). The petitioners stated that most of the projects opted for the Upfront Tariff 2013 were financed by either multilaterals or local banks and in order to expand investment in wind power sector, the developers would have to approach international commercial banks that need security from the credit agencies. The petitioners further argued that coverage by Sinosure or other international credit agencies have been allowed in the upfront tariffs of all other technologies, therefore, the Authority may also allow this fee in the wind upfront tariff as well.

The Authority observed that Sinosure or other credit insurance agencies fee has been allowed in the upfront tariffs of all other technologies. It was also considered that Sinosure fee has been allowed to one of the wind power project awarded tariff under cost plus mode by the Authority. Accordingly, the Authority after due consideration has decided that for wind power projects having foreign financing, an appropriate adjustment in the benchmark project cost will be allowed on account of Sinosure or other credit insurance fees, where applicable, at actual not exceeding 7% of the total benchmark foreign debt. In case the sponsors manage better alternative Sinosure/other credit insurance fees arrangement, the same will be considered at the time of allowing adjustment of such fees. The power producer, if it intends to claim this fees, shall submit relevant authentic documentary evidence to the Authority, within 15 days of Commercial Operations Date ("COD") of the relevant company/project. Accordingly, the companies that have opted and already been awarded the Upfront Tariff/2015, may apply during the validity period of this review decision in case they intend to avail this change.

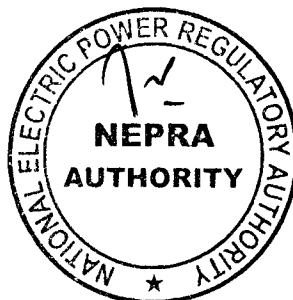


iii. **LIBOR Spread**

The petitioners submitted that spread of 4.5%, as allowed in the Upfront Tariff 2015, is on the lower side which should be revised to 5%-5.5%. For that purpose, few petitioners also referred the submissions of International Finance Corporation ("IFC") of allowing the spread on foreign financing to 5%. The petitioners informed that the projects that were able to achieve financial close under previous wind upfront tariff were either financed by local banks or multilateral agencies that generally finance at lower rates compared to commercial banks. Since there is a limit to which local and multilaterals can provide financing, therefore, future project developers will have to approach international commercial banks for financing which warrant increase in spread over LIBOR. The Authority noted that the submissions of IFC, referred by the petitioners, and other related aspects were duly considered while determining the Upfront Tariff 2015. It has also been observed that the Upfront Tariff 2015 of wind power projects with regards to spread of LIBOR is consistent with the upfront tariffs of all other technologies. In view thereof, the Authority considers that no change is justified in the Upfront Tariff 2015 on account of already allowed spread over LIBOR and has therefore decided to maintain its decision.

iv. **Time to Opt for Upfront Tariff**

The validity period of six months from the date of issuance of the Upfront Tariff 2015, i.e. till December 24, 2015 was approved by the Authority. The petitioners submitted that there are a number of requirements that a project has to fulfill to opt for upfront tariff. Among them, the conditions of getting an evacuation certificate and obtaining firm commitment from financiers regarding their proportions of debt financing are the most time consuming processes for which time frame of 180 days seem so stretched and unreasonable and requested to increase the same to one year from the date of final determination by the Authority. Few petitioners suggested to increase the time either to one year from the date of gazette notification of the determination or nine months from the date of availability of new grid code. The Authority noted that in the advertised proposal of upfront tariff, 2015, the time of twelve months to opt for upfront tariff was specified, however, later on in view of the rapid improvement in wind technology coupled with declining prices, the Authority decided to shrink that timeline to six months. Nonetheless, the Authority considered the submissions of the petitioner in this regard as well as examined the timelines allowed in the upfront tariffs of other technologies and noted that compliance of the specified requirements of Upfront Tariff 2015 and Upfront Tariff (Approval & Procedure) Regulations, 2011 requires appropriate time. Further, the Authority is of the view that validity period is to be reckoned from the date of notification instead of the issuance of the decision, as has been allowed in the upfront tariffs of other technologies. In view of above, the Authority has decided to change the validity period allowed in the Upfront Tariff 2015. As per the said change, this tariff shall be available up to 180 days from the date of notification of this review decision of the Authority. The companies opting for this tariff will have to achieve financial close within one year from the date of decision of the Authority awarding upfront tariff to them. In case, the



companies that have already been awarded Upfront Tariff 2015 want to avail this change may apply to the Authority during the validity period of this review decision.

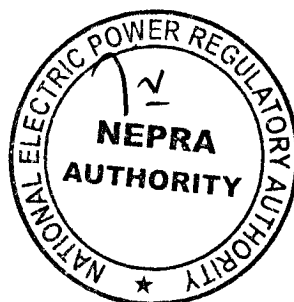
v. **Construction period**

The petitioners submitted that the Authority in Upfront Tariff 2015 has fixed the construction period of eighteen months for every size of the project which is unreasonable, discriminatory and discourages project developers for setting higher capacity projects. Few petitioners requested the Authority to allow eighteen months of construction for 50 MW of the project with an increase of three months for every additional 50 MW. One of the petitioners namely M/s Tricon Boston Consulting Corporation (Private) Limited during the hearing proposed to reduce the allowed construction time for 50 MW project to seventeen months with an increase of two months for every additional 50 MW. The representative of Central Power Purchasing Agency ("CPPA") during the hearing submitted that to lay the transmission infrastructure to evacuate power either from a 50 MW or a 250 MW wind power project, it takes approximately the same time. However, CPPA requested the Authority that if longer time will be allowed to larger projects then the construction period as already allowed to a 50 MW project should not be revised downward. The Authority noted that this issue was also raised by many parties and was thoroughly discussed during the proceedings of the Upfront Tariff 2015. The Authority also considered the construction time of the projects that have attained commercial operations and also gave due consideration to the fact that many construction activities can be done simultaneously for larger sizes of the projects. Lastly, the Authority noted that by fixing the maximum construction period to eighteen months, irrespective of the size of the project, advantage of economies of scale for larger projects is being offset. In view of above, the Authority is of the view that this issue has already been deliberated in detail and nothing new has been brought which requires change in decision of the Authority, therefore, decides to maintain its earlier decision on this issue, i.e. 18 months construction period for every size (up to 250 MW) of the project.

vi. **Removal of the Condition of Getting Power Evacuation Certificate from Power Purchaser**

The petitioners requested to remove the condition of obtaining a certificate from power purchaser regarding availability of power evacuation arrangement/capacity for absorption of power supplied into the national grid as specified in the Upfront Tariff 2015. The petitioners stated that as per the Guidelines of the Renewable Policy, it is the responsibility of the power purchaser to evacuate the power from a power producer, therefore, it is a burden on power producer to obtain such confirmation certificate. Few petitioners suggested that the Authority may require power producers to comply with this condition during the time allowed to achieve financial close and not as a pre-requisite to apply for the upfront tariff.

CPPA's representative during the hearing submitted that as per study being sponsored by USAID, it has been revealed that there will be congestions in National Transmission and Despatch Company's ("NTDC's") network



even for the wind power capacity in respect of which power evacuation certificates have already been issued. In case power purchaser, constrained with any technical issue, will not be able to evacuate power or will have to curtail the power from any power producer then it will be liable to pay the penalties to that power producer. CPPA further submitted that if tariff is awarded without power evacuation certificate and subsequently the power purchaser, due to any reason shall not be able to draw power then the projects will not be able to proceed to further milestones (financial close etc.) and the whole purpose will go in vain. In view of the foregoing, CPPA requested the Authority not to remove the requirement of getting power evacuation certificate from power purchaser.

The Authority noted that this condition was extensively considered while determining the Upfront Tariff 2013 as well as Upfront Tariff 2015. Hence, taking into consideration the grid constraints and stipulations of the Grid code as well as the aforementioned comments provided by CCPA, the Authority is of the view that this requirement is necessary and therefore decided to maintain the same.

**vii. Withholding Tax on Dividend**

The petitioners submitted that furtherance to the reduction of project cost in the Upfront Tariff, 2015 as compared to the Upfront Tariff 2013 and non-provision of the working capital and debt service reserve account cost etc. not allowing withholding tax on dividends will significantly impact the rate of return of investors, therefore, requested the Authority to allow the same. The Authority noted that it was specified in the Upfront Tariff 2015 that this cost item has not been allowed in upfront tariffs of other technologies in accordance with its recent decision on this issue. Hence, the Authority considers that its decision in this regard is consistent to the upfront tariffs of other technologies and does not require any change.

**viii. Project Cost**

Few petitioners requested to increase the per MW project cost allowed in the Upfront Tariff 2015 while stating that the low project costs will compel investors to use less efficient turbines which will in turn reduce the reliability of wind power projects in Pakistan. The Authority noted that in the advertised proposal, project cost of USD 1.97 million per MW was taken into account. However, based on the comments of different interveners including AEDB as well as keeping in view the various local factors, the Authority decided to revise upwards the same to USD 2.15 million and USD 2.26 million for foreign and local financings respectively. The Authority is of the view that besides adjustments in the project cost on account of Sinasure or other credit agency fees, no change is required to be made in this account, therefore, decides to maintain its decision in this regard.



ix. **Sharing in savings in spread over KIBOR/LIBOR**

It was specified in the Upfront Tariff 2015 that if the power producer will be able to secure financing on spreads over LIBOR/KIBOR less than what has been allowed then the benefit of savings in spread shall be shared between the power purchaser and power producer in the ratio of 60:40 respectively. Few petitioners requested the Authority to remove the stipulated sharing arrangement. The Authority noted that the condition of sharing of lower spreads has been made part in the upfront tariffs of all other technologies, therefore, in order to be consistent and to protect the interest of all the parties, the Authority decides to maintain its earlier decision in this regard.

x. **Debt Servicing Reserve Account (DSRA), Running Finance and Increased Land Cost**

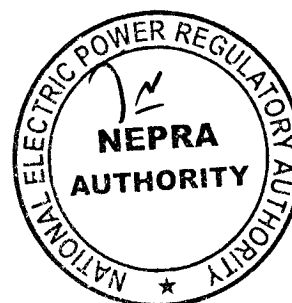
Few petitioners requested the Authority to allow the captioned costs in the Upfront Tariff 2015. The Authority noted that the provision of the costs related to DSRA and running finance were also requested by some of the interveners participated in the proceedings of Upfront Tariff 2015, however, the Authority after due consideration decided not to allow the same. Regarding the land cost submission, the Authority noted that this cost has already been taken into account in the project cost allowed in Upfront Tariff 2015. In view of that, the Authority considers that no change is required on account of these heads in the Upfront Tariff 2015.

4. **Clarifications:** In addition to above, certain clarifications were also sought by few petitioners regarding the following factors;

- Return on Equity during construction
- Duties and Taxes
- Insurance during operation

i. **Return on Equity during Construction**

Few petitioners requested the Authority that Return On Equity During Construction ("ROEDC") should be explicitly reflected in the tariff table of Upfront Tariff 2015. During the hearing, one of the petitioners also submitted that the Authority has not allowed ROEDC in the instant upfront tariff owing to which Internal Rate of Return ("IRR") has reduced to 15%. The Authority noted that in the Upfront Tariff, 2015, IRR of 17% was allowed, however, the components of ROEDC and Return on Equity ("ROE") were clubbed together. It is hereby clarified that the ROE component given in the below Order part includes ROEDC of Rs. 0.5869/kWh (foreign financing) and Rs. 0.6039/kWh (local financing).





ii. **Adjustment of duties and taxes**

Few petitioners requested the Authority to disclose all the duties and taxes which were considered while determining this tariff including 0.95% of Sindh Infrastructure Development. Considering the request, the Authority hereby clarifies that that no duties have been taken into account in the project cost for the determination of Upfront Tariff 2015. Para xvi of the Order of Upfront Tariff, 2015 stated that "*If the company is obligated to pay any tax on its income from generation of electricity from wind, or any duties and/or taxes, not being of refundable nature, are imposed on the company up to the commencement of its commercial operations for import of its plant, machinery and equipment, the exact amount paid by the company on these accounts shall be reimbursed by the power purchaser on production of original receipts. This payment should be considered as a pass-through payment spread over a twelve months period.*"

iii. **Insurance during Operation**

One of the petitioner submitted that the Authority has allowed insurance during operation as 1% of the EPC cost. The petitioner submitted that the amount of insurance and its premium are based on capitalization costs of total fixed assets, therefore, the captioned cost should be allowed based on same formula. The Authority noted that EPC cost constitutes major portion of the capital cost that has been allowed in the Upfront Tariff 2015. Other share of the capital cost includes project development costs, insurance during construction and financing costs, i.e. the capital expenditures that do not warrant insurance. It has also been noted that in the upfront tariffs of all other technologies, insurance during operation based on EPC costs has been allowed. Being consistent with Authority's earlier decisions for other upfront tariffs, the Authority is of the view that no change is required in the Upfront Tariff 2015 in this regard.



**ORDER**

5. The Authority hereby determines and approves the following upfront tariff for wind power generation, for delivery of electricity to the power purchaser:

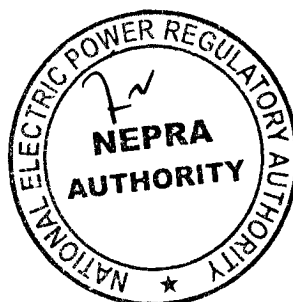
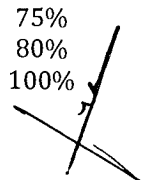
**REFERENCE TARIFF ON BOO BASIS (BASED ON 100% FOREIGN LOAN)**

Years	O & M	Insurance	Return on Equity	Principal repayment of debt	Interest	Total tariff
1	1.5039	0.6349	3.6070	4.2656	2.4669	12.4782
2	1.5039	0.6349	3.6070	4.4727	2.2597	12.4782
3	1.5039	0.6349	3.6070	4.6900	2.0425	12.4782
4	1.5039	0.6349	3.6070	4.9177	1.8147	12.4782
5	1.5039	0.6349	3.6070	5.1566	1.5759	12.4782
6	1.5039	0.6349	3.6070	5.4070	1.3255	12.4782
7	1.5039	0.6349	3.6070	5.6696	1.0629	12.4782
8	1.5039	0.6349	3.6070	5.9450	0.7875	12.4782
9	1.5039	0.6349	3.6070	6.2337	0.4988	12.4782
10	1.5039	0.6349	3.6070	6.5364	0.1960	12.4782
11 to 20	1.5039	0.6349	3.6070	-	-	5.7457
Levelized - Rs./kWh						10.6048
Indexation	PKR/US \$ & US CPI	PKR/US \$	PKR/US \$	PKR/US \$	PKR/US \$ & LIBOR	

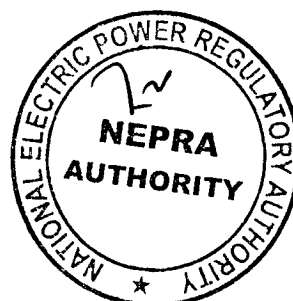
Levelized tariff discounted at 10% per annum works out to US cents 10.4481/kWh.

- i) This tariff is applicable for wind power generation only.
- ii) This tariff will be limited to the extent of net annual energy generation supplied to the power purchaser up to 35% net annual plant capacity factor. Net annual energy generation supplied to the power purchaser in a year, in excess of 35% net annual plant capacity factor will be charged at the following tariffs:

Net annual plant capacity factor	% of the prevalent tariff
Above 35% to 36%	75%
Above 36% to 37%	80%
Above 37%	100%



- iii) The power purchaser will not take the wind risk; relevant wind power generation company (hereinafter referred to as the "company") will be required to account for this risk.
- iv) Only wind power generation companies (hereinafter referred to as the "companies") meeting the following conditions will be eligible for this tariff:
- Companies recommended by the relevant agency for the grant of upfront tariff.
  - Companies who certify that all the plant and machinery to be installed will be new and of international standards in the format attached as Annex-IV.
  - Companies with installed capacity of up to 250 MW.
  - Companies who have a certificate from the power purchaser regarding availability of power evacuation arrangement/capacity for absorption of power supplied into the national grid in the format attached as Annex-V.
- v) The plant and machinery of the company, will be certified as new and of international standard by an independent engineer, appointed in accordance with the terms of energy purchase agreement before any payment under this tariff is made. The said certificate shall be obtained and retained by the power purchaser.
- vi) The choice to opt for this tariff will only be available up to 180 days from the date of gazette notification of this review decision of the Authority. The companies that have opted and already been awarded Upfront Tariff 2015, may apply to the Authority in case they want to avail this change.
- vii) The companies opting for this tariff will have to achieve financial close within one year from the date of decision of the Authority awarding upfront tariff to them. The upfront tariff granted to any company will no longer remain applicable/valid, if financial close is not achieved by the relevant company in the abovementioned timeline or a generation license is declined to that company.
- viii) The decision to opt for upfront tariff once exercised will be irrevocable.
- ix) In the tabulated above tariff no adjustment for certified emission reductions has been accounted for. However, upon actual realization of carbon credits, the same shall be distributed between the power purchaser and the power producer in accordance with the



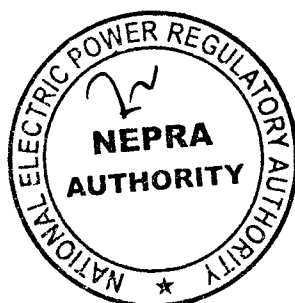
applicable GOP Policy for Development of Renewable Energy for Power Generation, 2006, as amended from time to time.

- x) The targeted maximum construction period after financial close is 18 months. No adjustment will be allowed in this tariff to account for financial impact of any delay in project construction. However, the failure of a project to complete construction within 18 months of financial close will not invalidate the tariff granted to it.
- xi) This tariff will be applicable for a period of twenty (20) years from the commencement of commercial operations.
- xii) The terms and conditions specified herein form an integral part of this tariff.
- xiii) Adjustment on account of savings in cost of debt

This upfront tariff has been worked out on the basis of 3 months LIBOR of 0.2706% plus a premium of 450 basis points for foreign financing and 3 months KIBOR of 8.22% plus a premium of 300 basis points for local financing. In case negotiated spread is less than the said limits, the savings in the spread over LIBOR/KIBOR shall be shared by the power purchaser and the power producer in the ratio of 60:40 respectively. The power producer shall submit relevant authentic documentary evidence to the Authority, for the aforesaid adjustment within 15 days of commercial operations date of the relevant company. In case the premium on LIBOR/KIBOR is higher than that mentioned above, no adjustment on the basis of actual higher premium will be allowed.

- xiv) Adjustment on account of variations in LIBOR/KIBOR

The Authority has assessed interest during construction of USD 0.080 million per MW for foreign financing and USD 0.192 million per MW for local financing. The interest during construction will be reassessed after commercial operations date for the allowed construction period of eighteen months, starting from the date of financial close of the relevant company, on the same computation basis as already adopted, by applying 3 months KIBOR/LIBOR of last day of the preceding quarter (plus allowed spread thereon), on the basis of phasing for debt injection considered in the computation of upfront tariff. The power producer shall submit relevant authentic documentary evidence to the Authority, for the aforesaid adjustment within fifteen days of the commercial operations date of the relevant company.



xv) Adjustment for loan structure

The company will have to provide its loan structure to the Authority, along with its application opting for upfront tariff in the format attached as Annex-IV. The Authority will allow tariff to the company on the basis of its proposed loan structure. The tariff once allowed (i.e. on the basis of 100% foreign loan, 100% local loan or mixture of foreign and local loan) will not be subject to any further change, except for the adjustments in accordance with the mechanisms detailed herein, where applicable, and the application of relevant indexations as detailed in this order.

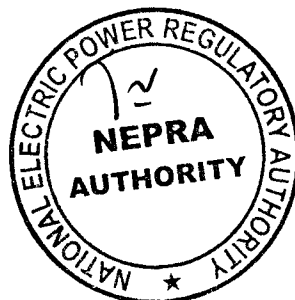
Tariffs detailed in this order have been calculated on the basis of project financing structure of equity plus 100% foreign loan and equity plus 100% local loan (Annex-I). For proposed loan composition other than the one mentioned above i.e. 100% foreign/local, the Authority after consideration will allow two part tariff on the basis of request as follows:

Part 1	=	Tariff calculated on the basis of project financing structure of equity plus 100% foreign loan x foreign debt of the relevant company as a percentage of its total debt
Part 2	=	Tariff calculated on the basis of project financing structure of equity plus 100% local loan (Note 1) x local debt of the relevant company as a percentage of its total debt

Note 1 : Upfront tariff calculated on the basis of project financing structure of equity plus 100% local loan, along with its applicable onetime adjustment, is attached as **Annex-I**.

All the terms and conditions detailed in this order will, with due alteration of details, also apply to two part tariff allowed to any company.

In case of two part tariff, part 2 initially granted, in addition to adjustments applicable on part 1, will also be subsequently adjusted, after commercial operations date of the relevant company, in accordance with the onetime adjustment mechanism stipulated in Annex-I. The relevant company shall make a request for allowing onetime adjustment within 15 days of commercial operations date of the relevant company.



Indexations/adjustment for part 1 will be allowed in accordance with the mechanism for indexations/ adjustment applicable for tariff calculated on the basis of project financing structure of equity plus 100% foreign loan as detailed in xviii (A) below.

Indexations/adjustment for part 2 will be allowed in accordance with the mechanism for indexations/adjustment for tariff calculated on the basis of project financing structure of equity plus 100% local loan as detailed in xviii (B) below.

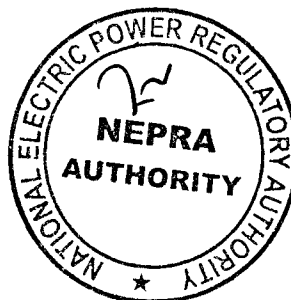
xvi) Adjustment on account of Sinasure Fees

For projects having foreign financing, an appropriate adjustment in benchmark project cost will be allowed on account of Sinasure or other credit insurance fees, where applicable, at actual not exceeding 7% of the total benchmark foreign debt. In case the sponsors manage better alternative Sinasure or other credit insurance arrangement, the same will be considered at the time of allowing adjustment of such fees. The power producer, if it intends to claim Sinasure or other such fees, shall submit relevant authentic documentary evidence to the Authority, within 15 days of commercial operations date of the relevant company/project. Accordingly, the companies that have opted and already been awarded Upfront Tariff 2015, may apply to the Authority in case they want to avail this change.

xvii) Pass-through items

If the company is obligated to pay any tax on its income from generation of electricity from wind, or any duties and/or taxes, not being of refundable nature, are imposed on the company up to the commencement of its commercial operations for import of its plant, machinery and equipment, the exact amount paid by the company on these accounts shall be reimbursed by the power purchaser on production of original receipts. This payment should be considered as a pass-through payment spread over a twelve months period. Furthermore, in such a scenario, the company shall also submit to the power purchaser details of any tax savings and the power purchaser shall deduct the amount of these savings from its payment to the company on account of taxation.

The adjustment for duties and/or taxes will be restricted only to the extent of duties and/or taxes directly imposed on the company. No adjustment for duties and/or taxes imposed on third parties such as contractors, suppliers, consultants, etc., will be allowed. Further, withholding tax on dividend will also not be allowed as a pass through item.



xviii) Indexations/Adjustment

The tariff allowed to any company, after adjustments according to the mechanisms provided herein, will remain unchanged throughout the tariff control period, except for the adjustments due to indexations/adjustment detailed in this order. The indexations of O&M, return on equity, principal repayment of debt and interest will be allowed on quarterly basis on 1<sup>st</sup> July, 1<sup>st</sup> October, 1<sup>st</sup> January and 1<sup>st</sup> April. Insurance component will be adjusted annually. The mechanism of indexations/adjustment will be as under:

A) INDEXATIONS/ADJUSTMENT APPLICABLE FOR TARIFF CALCULATED ON THE BASIS OF PROJECT FINANCING STRUCTURE OF EQUITY PLUS 100% FOREIGN LOAN

a) Indexations applicable to O & M:

$$OM_{(PREV)} = OM_{(PREV)} * US\ CPI_{(REV)} / US\ CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$$

Where:

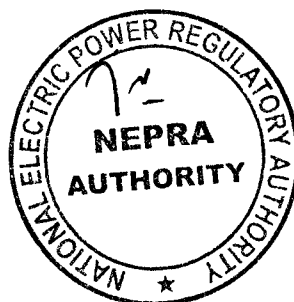
$OM_{(PREV)}$  = The revised applicable O&M tariff component indexed with US CPI and exchange rate parity

$OM_{(PREV)}$  = The reference O&M tariff component for the relevant period

$US\ CPI_{(REV)}$  = The revised US CPI (all urban consumers) based on latest available information with respect to US CPI (notified by US Bureau of Labor Statistics)

$US\ CPI_{(REF)}$  = Reference US CPI (all urban consumers)-current reference 233.707 US CPI (all urban consumers) for the month of January, 2015 as notified by the US Bureau of Labor Statistics

$ER_{(REV)}$  = Revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan as at the last day of the preceding quarter



$$ER_{(REF)} = \text{Reference TT \& OD selling rate of US dollar - current reference 101.50}$$

b) Adjustment of insurance component

The actual insurance cost for the minimum cover required under contractual obligations with the power purchaser not exceeding 1% of Rs. 194.67 million per MW (US \$ 1.9179 million per MW) will be treated as pass-through. Insurance component of reference tariff shall be adjusted annually as per actual upon production of authentic documentary evidence according to the following formula:

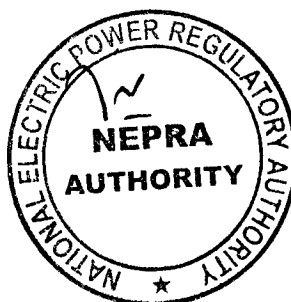
AIC	=	$Ins_{(Ref)} / P_{(Ref)} * P_{(Act)}$
Where		
AIC	=	Adjusted insurance component of tariff
$Ins_{(Ref)}$	=	Reference insurance component of tariff
$P_{(Ref)}$	=	Reference premium @ 1% of Rs.194.67 million
$P_{(Act)}$	=	Actual premium per MW of installed capacity or 1% of US \$ 1.9179 million converted into Pak Rupees on exchange rate prevailing on the 1 <sup>st</sup> day of the insurance coverage period, whichever is lower

c) Indexations applicable to return on equity

$$ROE_{(PREV)} = ROE_{(PREV)} * ER_{(REV)} / ER_{(REF)}$$

Where:

$$ROE_{(PREV)} = \text{The revised applicable return on equity tariff component indexed with exchange rate parity}$$





$ROE_{(REF)}$  = The reference return on equity tariff component for the relevant period

$ER_{(REV)}$  = Revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan as at the last day of the preceding quarter

$ER_{(REF)}$  = Reference TT & OD selling rate of US dollar - current reference 101.50

d) Indexations applicable to debt

Foreign debt and its interest will be adjusted on quarterly basis, on account of revised TT & OD selling rate of US Dollar, as notified by the National Bank of Pakistan as at the last day of the preceding quarter, over the applicable reference exchange rate.

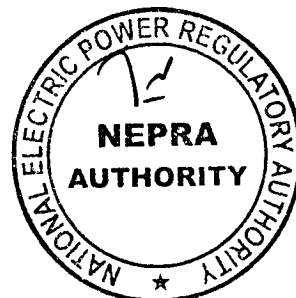
e) Indexations applicable to interest after achieving COD

$$\Delta I = P_{(REV)} * (LIBOR_{(REV)} - 0.2706\%) / 4$$

Where:

$\Delta I$  = The variation in interest charges applicable corresponding to variation in 3 months LIBOR.  $\Delta I$  can be positive or negative depending upon whether 3 months LIBOR<sub>(REV)</sub> per annum > or < 0.2706%. The interest payment obligation will be enhanced or reduced to the extent of  $\Delta I$  for each quarter under adjustment.

$P_{(REV)}$  = is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex II), on a quarterly basis at the relevant quarterly calculations date. Quarter 1 shall commence on the commercial operations date (i.e. the first figure will be used for the purposes of



calculation of interest for the first quarter after commercial operations date).

$LIBOR_{(REV)}$  = Revised 3 months US \$ LIBOR as at the last day of the preceding quarter

B) INDEXATIONS/ADJUSTMENT APPLICABLE FOR TARIFF CALCULATED ON THE BASIS OF PROJECT FINANCING STRUCTURE OF EQUITY PLUS 100% LOCAL LOAN

a) Indexations applicable to O & M:

$OM_{(LREV)}$  =  $OM_{(LREF)} * US\ CPI_{(REV)} / US\ CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$

Where:

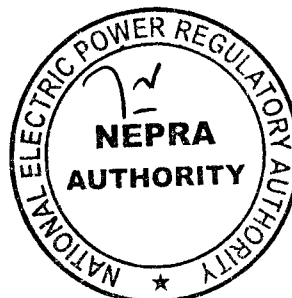
$OM_{(LREV)}$  = The revised applicable O & M tariff component indexed with US CPI and exchange rate parity

$OM_{(LREF)}$  = The reference O & M tariff component for the relevant period

$US\ CPI_{(REV)}$  = The revised US CPI (all urban consumers) based on latest available information with respect to US CPI (notified by US Bureau of Labor Statistics)

$US\ CPI_{(REF)}$  = Reference US CPI (all urban consumers) – current reference 233.707 US CPI (all urban consumers) for the month of January 2015 as notified by the US Bureau of Labor Statistics

$ER_{(REV)}$  = Revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan as at the last day of the preceding quarter.



$$ER_{(REF)} = \text{Reference TT \& OD selling rate of US dollar - current reference 101.50}$$

b) Adjustment of insurance component

The actual insurance cost for the minimum cover required under contractual obligations with the power purchaser not exceeding 1% of Rs. 194.67 million per MW (US \$ 1.9179 million per MW) will be treated as pass-through. Insurance component of reference tariff shall be adjusted annually as per actual upon production of authentic documentary evidence according to the following formula:

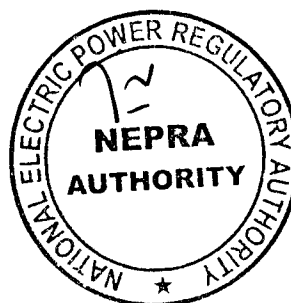
AIC	=	$Ins_{(Ref)} / P_{(Ref)} * P_{(Act)}$
Where		
AIC	=	Adjusted insurance component of tariff
$Ins_{(Ref)}$	=	Reference insurance component of tariff
$P_{(Ref)}$	=	Reference premium @ 1% of Rs.194.67 million
$P_{(Act)}$	=	Actual premium per MW of the installed capacity or 1% of US \$ 1.9179 million converted into Pak Rupees on exchange rate prevailing on the 1 <sup>st</sup> day of the insurance coverage period whichever is lower

c) Indexations applicable to return on equity

$$ROE_{(LREV)} = ROE_{(LREF)} * ER_{(REV)} / ER_{(REF)}$$

Where:

$$ROE_{(LREV)} = \text{The revised applicable return on equity tariff component indexed with exchange rate parity}$$



$ROE_{(LREF)}$  = The reference return on equity tariff component for the relevant period

$ER_{(REV)}$  = Revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan as at the last day of the preceding quarter

$ER_{(REF)}$  = Reference TT & OD selling rate of US dollar – current reference 101.50

d) Indexation applicable to interest after achieving COD

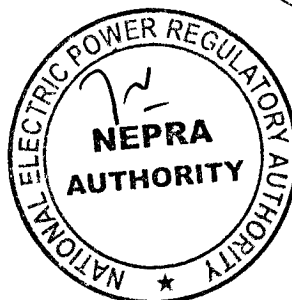
$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 8.22\%) / 4$$

Where:

$\Delta I$  = The variation in interest charges applicable corresponding to variation in 3 months KIBOR.  $\Delta I$  can be positive or negative depending upon whether 3 months KIBOR<sub>(REV)</sub> per annum > or < 8.22%. The interest payment obligation will be enhanced or reduced to the extent of  $\Delta I$  for each quarter under adjustment.

$P_{(REV)}$  = is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex III), on a quarterly basis at the relevant quarterly calculations date. Quarter 1 shall commence on the commercial operations date (i.e. the first figure will be used for the purposes of calculation of interest for the first quarter after commercial operations date).

$KIBOR_{(REV)}$  = Revised 3 months KIBOR as at the last day of the preceding quarter



**Note:** Above described indexations/adjustments will be approved and announced by the Authority within fifteen days of the applicant's request for indexations/adjustments in tariff in accordance with the requisite mechanisms stipulated herein.

xix) **Other Terms and Conditions of Tariff:**

a. **Design & Manufacturing Standards:**

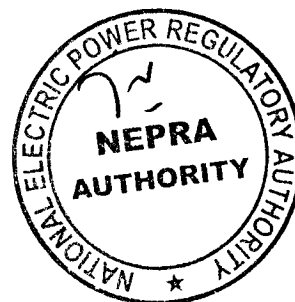
Wind turbine generation system shall be designed, manufactured and tested in accordance with the latest IEC standards or other equivalent standards. All plant and equipment shall be new.

b. **Emissions Trading/Carbon Credits:**

The company granted this tariff shall process and obtain emissions/carbon credits expeditiously and credit the proceeds to the power purchaser in accordance with the applicable GOP Policy for Development of Renewable Energy for Power Generation, 2006, as amended from time to time.

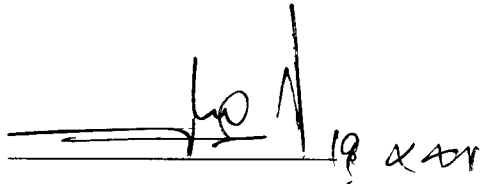
c. **General:**

- The power purchaser before signing the Energy Purchase Agreement shall satisfy itself that the plant and machinery proposed to be installed is of a quality acceptable to it.
- Pre COD sale of electricity is allowed to the power producer, subject to the terms and conditions of Energy Purchase Agreement, at the applicable tariff excluding principal repayment of debt component and interest component. However, pre COD sale will not alter the required commercial operations date stipulated in the Energy Purchase Agreement in any manner.
- General assumptions, which are not covered in this decision and National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011, may be dealt with as per the standard terms of the Energy Purchase Agreement.




6. The above order of the Authority, along with attached annexures (I to V), are recommended for notification by the Federal Government, in the Official Gazette, in accordance with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.
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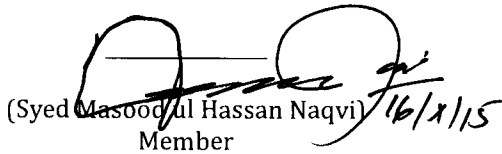
**AUTHORITY**



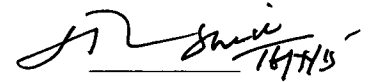
(Khawaja Muhammad Naeem)  
Member



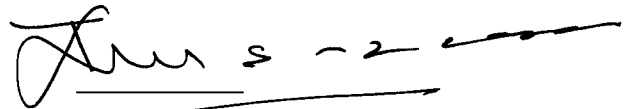
(Himayat Ullah Khan)  
Member



(Syed Masoodul Hassan Naqvi)  
Member



(Maj. (R) Haroon Rashid)  
Member



(Brig. (R) Tariq Saddozai)  
Chairman



19-10-2015

**UPFRONT TARIFF CALCULATED ON THE BASIS OF  
PROJECT FINANCING STRUCTURE OF EQUITY PLUS 100% LOCAL LOAN  
ALONG WITH ITS APPLICABLE ONETIME ADJUSTMENT**

## 1. Reference tariff on BOO basis

Years	O & M	Insurance	Return on Equity	Principal repayment of debt	Interest	Total tariff
1	1.5039	0.6349	3.7820	3.2424	6.1594	15.3226
2	1.5039	0.6349	3.7820	3.6218	5.7800	15.3226
3	1.5039	0.6349	3.7820	4.0456	5.3561	15.3226
4	1.5039	0.6349	3.7820	4.5190	4.8828	15.3226
5	1.5039	0.6349	3.7820	5.0478	4.3540	15.3226
6	1.5039	0.6349	3.7820	5.6384	3.7634	15.3226
7	1.5039	0.6349	3.7820	6.2981	3.1036	15.3226
8	1.5039	0.6349	3.7820	7.0351	2.3666	15.3226
9	1.5039	0.6349	3.7820	7.8583	1.5435	15.3226
10	1.5039	0.6349	3.7820	8.7778	0.6241	15.3226
11 to 20	1.5039	0.6349	3.7820	-	-	5.9208
Levelized Tariff – Rs./kWh						12.7064
Indexation	PKR/US \$ & US CPI	PKR/US \$	PKR/US \$	-	KIBOR	

2. This tariff is calculated on the basis of project financing structure of equity plus 100% local loan.

3. Onetime adjustment for PKR / US \$ exchange rate variation

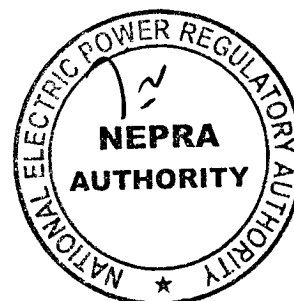
The base amount for quarter 1 (as indicated in Annex-III) will be adjusted for exchange rate variation, for 270 days after financial close of the relevant company, in accordance with the onetime adjustment mechanism stipulated below:

$$B_{(LFIN)} = (B_{(LREF)} \times 20\%) + (B_{(LREF)} \times 80\% \times ER_{(REV)} / ER_{(REF)})$$

Where:

$B_{(LFIN)}$  = The revised base amount for the first quarter after allowing onetime adjustment for exchange rate parity

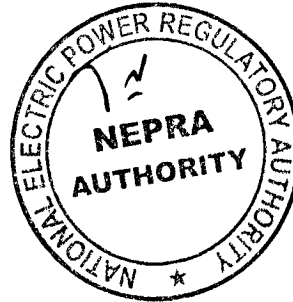
$B_{(LREF)}$  = The reference base/amount (as indicated in Annex-III) for the first quarter



ER<sub>(REV)</sub> = The average, for a period of 270 days after financial close, of TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

ER<sub>(REF)</sub> = Reference TT & OD selling rate of US dollar i.e. 101.50

Note: After the revision of the base amount of quarter 1, in accordance with the onetime adjustment mechanism stipulated above, the debt service schedule at Annex-III will be recalculated, on the same computation basis as already adopted, and revised principal repayment and interest tariff components will be worked out for subsequent indexations, where applicable.

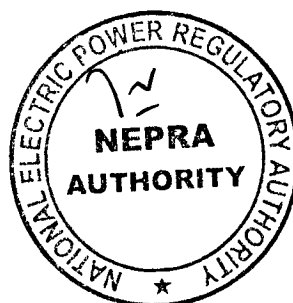




## UPFRONT TARIFF FOR WIND POWER PROJECTS

Debt Servicing Schedule based on 100% foreign financing for the purpose of Indexation of debt component only

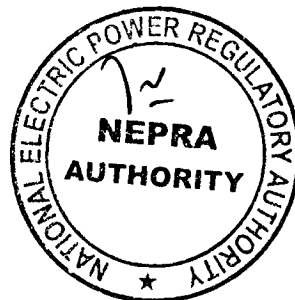
Relevant Quarters	Base amount (USD)	Principal Repayment (USD)	Interest (USD)	Balance Principal (USD)	Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh
1	1,609,855	31,642	19,200	1,578,213	4.2656	2.4669
2	1,578,213	32,019	18,823	1,546,194		
3	1,546,194	32,401	18,441	1,513,792		
4	1,513,792	32,788	18,054	1,481,005		
5	1,481,005	33,179	17,663	1,447,826	4.4727	2.2597
6	1,447,826	33,574	17,267	1,414,252		
7	1,414,252	33,975	16,867	1,380,277		
8	1,380,277	34,380	16,462	1,345,897		
9	1,345,897	34,790	16,052	1,311,107	4.6900	2.0425
10	1,311,107	35,205	15,637	1,275,902		
11	1,275,902	35,625	15,217	1,240,278		
12	1,240,278	36,050	14,792	1,204,228		
13	1,204,228	36,480	14,362	1,167,748	4.9177	1.8147
14	1,167,748	36,915	13,927	1,130,834		
15	1,130,834	37,355	13,487	1,093,479		
16	1,093,479	37,800	13,041	1,055,678		
17	1,055,678	38,251	12,591	1,017,427	5.1566	1.5759
18	1,017,427	38,707	12,134	978,720		
19	978,720	39,169	11,673	939,551		
20	939,551	39,636	11,206	899,914		
21	899,914	40,109	10,733	859,805	5.4070	1.3255
22	859,805	40,587	10,254	819,218		
23	819,218	41,071	9,770	778,147		
24	778,147	41,561	9,281	736,585		
25	736,585	42,057	8,785	694,529	5.6696	1.0629
26	694,529	42,559	8,283	651,970		
27	651,970	43,066	7,776	608,904		
28	608,904	43,580	7,262	565,324		
29	565,324	44,099	6,742	521,225	5.9450	0.7875
30	521,225	44,625	6,216	476,599		
31	476,599	45,158	5,684	431,442		
32	431,442	45,696	5,146	385,745		
33	385,745	46,241	4,601	339,504	6.2337	0.4988
34	339,504	46,793	4,049	292,712		
35	292,712	47,351	3,491	245,361		
36	245,361	47,916	2,926	197,445		
37	197,445	48,487	2,355	148,958	6.5364	0.1960
38	148,958	49,065	1,777	99,893		
39	99,893	49,650	1,191	50,243		
40	50,243	50,243	599	-		



## UPFRONT TARIFF FOR WIND POWER PROJECTS

Debt Servicing Schedule based on 100% local financing for the purpose of Indexation of debt component only

Relevant Quarter	Base amount (Rs.)	Principal Repayment (Rs.)	Interest (Rs.)	Balance Principal (Rs.)	Principal Repayment of debt Rs./kwh.	Interest Rs./kWh
1	171,954,445	2,383,165	4,823,322	169,571,280	3.2424	6.1594
2	169,571,280	2,450,013	4,756,474	167,121,267		
3	167,121,267	2,518,736	4,687,752	164,602,531		
4	164,602,531	2,589,386	4,617,101	162,013,145	3.6218	5.7800
5	162,013,145	2,662,019	4,544,469	159,351,126		
6	159,351,126	2,736,688	4,469,799	156,614,438		
7	156,614,438	2,813,452	4,393,035	153,800,986	4.0456	5.3561
8	153,800,986	2,892,370	4,314,118	150,908,616		
9	150,908,616	2,973,501	4,232,987	147,935,116		
10	147,935,116	3,056,907	4,149,580	144,878,208	4.5190	4.8828
11	144,878,208	3,142,654	4,063,834	141,735,555		
12	141,735,555	3,230,805	3,975,682	138,504,750		
13	138,504,750	3,321,429	3,885,058	135,183,321	5.0478	4.3540
14	135,183,321	3,414,595	3,791,892	131,768,726		
15	131,768,726	3,510,374	3,696,113	128,258,351		
16	128,258,351	3,608,840	3,597,647	124,649,511	5.6384	3.7634
17	124,649,511	3,710,068	3,496,419	120,939,442		
18	120,939,442	3,814,136	3,392,351	117,125,307		
19	117,125,307	3,921,122	3,285,365	113,204,184	6.2981	3.1036
20	113,204,184	4,031,110	3,175,377	109,173,074		
21	109,173,074	4,144,183	3,062,305	105,028,892		
22	105,028,892	4,260,427	2,946,060	100,768,465	7.0351	2.3666
23	100,768,465	4,379,932	2,826,555	96,388,533		
24	96,388,533	4,502,789	2,703,698	91,885,744		
25	91,885,744	4,629,092	2,577,395	87,256,652	7.8583	1.5435
26	87,256,652	4,758,938	2,447,549	82,497,714		
27	82,497,714	4,892,426	2,314,061	77,605,288		
28	77,605,288	5,029,659	2,176,828	72,575,629	8.7778	0.6241
29	72,575,629	5,170,741	2,035,746	67,404,888		
30	67,404,888	5,315,780	1,890,707	62,089,108		
31	62,089,108	5,464,888	1,741,599	56,624,220	7.8583	1.5435
32	56,624,220	5,618,178	1,588,309	51,006,042		
33	51,006,042	5,775,768	1,430,719	45,230,274		
34	45,230,274	5,937,778	1,268,709	39,292,496	8.7778	0.6241
35	39,292,496	6,104,333	1,102,155	33,188,163		
36	33,188,163	6,275,559	930,928	26,912,604		
37	26,912,604	6,451,589	754,899	20,461,015	8.7778	0.6241
38	20,461,015	6,632,556	573,931	13,828,460		
39	13,828,460	6,818,599	387,888	7,009,861		
40	7,009,861	7,009,861	196,627	0		



Date: \_\_\_\_\_

The Registrar,  
National Electric Power Regulatory Authority,  
Islamabad

**SUBJECT:-- Certifications in respect of application opting for upfront tariff for wind power generation**

I, [NAME, DESIGNATION], being the duly Authorized representative of [NAME OF APPLICANT COMPANY] by virtue of [BOARD RESOLUTION/POWER OF ATTORNEY DATED ], hereby confirm that for our project of [GROSS INSTALLED CAPACITY OF THE PROJECT] MW installed capacity to be located at [ADDRESS OF THE PROJECT SITE]:

1. All the plant and machinery to be installed will be brand new and of international standards.
2. [NAME OF APPLICANT COMPANY] may be granted upfront tariff based on the following loan structure:

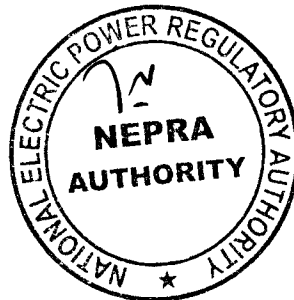
Foreign loan	_____	%
Local loan	_____	
<b>TOTAL</b>	<b>_____</b>	<b>100</b>

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Company Stamp



[On letter head of power purchaser]

Annexure - V

Date: \_\_\_\_\_

The Registrar,  
National Electric Power Regulatory Authority,  
Islamabad

**SUBJECT:-- Certification in respect of availability of power evacuation arrangement/absorption of power**

We hereby confirm that necessary arrangements will be in place, to evacuate and absorb power in the national grid, supplied by wind power generation project of [NAME OF THE COMPANY], having [GROSS INSTALLED CAPACITY OF THE PROJECT] MW gross installed capacity to be located at [ADDRESS OF THE PROJECT SITE]. The Authority may accordingly grant upfront tariff to [NAME OF THE COMPANY] for the aforesaid project.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Company Stamp

